E-DRP (DISASTER RECOVERY PLANNING) IN CIMA

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ABSTRAK

Projek ini menerangkan dan memaparkan rancangan pemulihan bencana untuk organisasi perkilangan dan perindustrian. Cement Industries of Malaysia Berhad (CIMA) diambil sebagai kajian kes. Melalui rancangan pemulihan ini, beberapa langkah telah dipertingkatkan dan diperbaiki seperti penilaian risiko dan analisis terhadap perjalanan proses perniagaan ketika berlakunya bencana. Kajian ini menumpukan kepada beberapa jenis bencana iaitu kebakaran, kegagalan perkakasan dan perisian, kegagalan rangkaian (LAN & WAN), kerosakan pendingin hawa, kegagalan elektrik berfungsi, dan virus. Rancangan pemulihan adalah amat penting bagi organisasi perkilangan dan perindustrian untuk menyokong aplikasi perniagaan dan memastikan proses perniagaan berjalan seperti sediakala. Sekiranya bencana terjadi, ia akan menggangu operasi perniagaan yang melibatkan penggunaan perkakasan dan perisisan. Kajian ini juga turut menerangkan kaedah yang perlu diambil dalam fasa perancangan dan pelaksanan pemulihan bencana. Cadangan kerangka kerja pemulihan ini merangkumi operasi sebelum bencana, ketika bencana dan proses atau prosedur yang perlu dilakukan selepas berlakunya bencana. Pelan pemulihan ini juga turut menerangkan operasi yang lakukan untuk mengelakkan bencana seperti kegagalan perkakasan dan perisian. Akhir sekali, melalui aktiviti penyelidikan dan penilaian risiko dan analisis, telah memperkenalkan model Pemulihan Bencana. Model yang dibangun berdasarkan 3 teknik iaitu analisis data, formula dan pemerhatian. UML digunakan untuk mengilustrasi dan memvisualisasikan model keperluan. Prototaip sistem telah dibangunkan dengan aplikasi yang sesuai supaya kesan terhadap proses perniagaan dan aktiviti perkilangan dapat dilakukan dengan cara mudah dan difahami.

ABSTRACT

This project presents a disaster recovery plan in manufacturing and industrial organizations. Cement Industries of Malaysia Berhad headquarter (CIMA HQ) is taken as a case study. The proposed strategies and recommendations of disaster recovery plan which has been enhanced and improved buy researcher based on risk assessment and business impact analysis. The type of disaster in this study focuses on fire, hardware and software failure, network failure (LAN & WAN), breakdown of air conditioner, power failure) no electrical supply and virus and malicious attacks. Disaster Recovery Planning is becoming a necessity for manufacturing and industrial organizations to support critical business software applications during a major incident or disaster that can disrupt day-to-day operations that involve the utilization of the specified software applications and to ensure business processes continue as a normal. If disaster happens, it will disrupt business operations involving the use of hardware and software. This study also describes the methods that should be taken in the planning and execution phases of disaster recovery. The proposed framework includes the operations of recovery before disaster, during disaster and the process after disaster. This recovery plan also describes the operations that need to prevent disasters such as hardware and software failure. Finally, through the research and business impact analysis, has introduced a disaster recovery model. The developed model is based on three techniques of data analysis, formulation and observation. UML is used to illustrate and visualize the model needs. The system prototype was developed with the appropriate application to the impact on business processes and manufacturing activities had been done simple and understandable way.

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LIST OF ABBREVIATIONS

CIMA	Cement Industries of Malaysia Berhad
ICT	Information and Communication Technology
ERP	Enterprise Resource Planning
CDRP	Computer Disaster Recovery Plan
RA	Risk Assessment
BIA	Business Impact Analysis
CDRP	Control Disaster Recovery Plan
ERP	Enterprise Resource Planning
PLC	Programmable Logic Control
SCADA	Supervisory Control and Data Acquisition
LAN	Local Area Network
WAN	Wide Area Network
MTD	Minimum Tolerable Downtime
RTO	Recovery Time Objective
RPO	Recovery Point Objective
WTC	World Trade Center
MyCERT	Malaysian Computer Emergency Response Team
NISER	National ICT Security and Emergency Response Team

CHAPTER ONE

INTRODUCTION

Information and Communication Technology (ICT) has become embedded in the framework of virtually every aspect of a business. Computing is no longer found doing only background processing. Instead, critical business data can be found across the enterprise on desktop, personnel computers and departmental local area networks, as well as in the data center. The same information technology driving new sources of competitive advantage also has created new expectations and vulnerabilities. Key business initiatives such as plant systems, enterprise resource planning (ERP), supply chain management, customer relationship management and e-business have made continuous, ubiquitous access to information crucial to an organization. ICT facilities have potential to deliver immediate satisfaction or dissatisfaction to organizations and the public either to improve efficiencies or to feel the impact of disruption. Serious business interruptions are now measured in minutes rather than hours. Because electronic transactions and communications take place so quickly, the amount of work and business lost in an hour far exceeds the toll of previous decades. Hence, it is critical to the ICT facilities to maintain with the highest possible levels of availability and operability for continued business operations in any event.

Disasters are unexpected or sudden events that adversely affect the ability of organization to provide critical business function and affect any information center to perform its function in a timely and efficient manner. Planning for a

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